

Appl. No. 09/916,017
Amdt. dated Thursday, June 19, 2003
Reply to Office Action of January 22, 2003

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-9 (withdrawn)

Claim 10. (currently amended) A DNA sequence comprising a promoter operatively linked to a transcription sequence; wherein the transcription sequence, when transcribed, produces a messenger RNA sequence that comprises a translatable sequence encoding a toxin, and an untranslated sequence; wherein the untranslated sequence inhibits translation of the toxin sequence under conditions that exist within normal mammalian cells that do not overexpress eukaryotic initiation factor eIF4E; and wherein the untranslated sequence allows translation of the toxin sequence under conditions that exist within mammalian cells that overexpress eukaryotic initiation factor eIF4E relative to normal cells; and wherein the untranslated sequence further comprises a hairpin secondary structure conformation having a stability of $\Delta G \geq$ about 50 Kcal/Mol.

Claim 11. (Original) A DNA sequence as recited in Claim 10, wherein the untranslated sequence allows translation of the toxin sequence under conditions which exist within mammalian cells that overexpress eukaryotic initiation factor eIF4E at least 2-fold greater relative to normal cells.

Claim 12. (Previously amended) A DNA sequence as recited in Claim 10, wherein the untranslated sequence comprises the 5' untranslated sequence selected from the group consisting of fibroblast growth factor-2, cyclin D1, proto-oncogene *c-myc*, vascular endothelial growth factor, and ornithine decarboxylase.

Claim 13. (Original) A DNA sequence as recited in Claim 10, wherein the encoded toxin is a conditional toxin.

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Claim 14. (Previously amended) A DNA sequence as recited in Claim 13, wherein the encoded conditional toxin is a herpes thymidine kinase.

Claim 15. (Previously amended) A DNA sequence as recited in Claim 14, wherein the untranslated sequence comprises the 5' untranslated sequence of fibroblast growth factor-2.

Claim 16. (Previously amended) A DNA sequence as recited in Claim 14, wherein the untranslated sequence comprises the 5' untranslated sequence selected from the group consisting of proto-oncogene *c-myc*, vascular endothelial growth factor, and ornithine decarboxylase.

Claim 17. (Cancelled).

Claim 18. (Currently amended) A DNA sequence as recited in Claim 17 10, wherein the untranslated sequence comprises a G/C- rich 5'UTR sequence.

Claim 19. (Previously added) A DNA sequence as recited in Claim 18, wherein the untranslated sequence comprises mRNA with at least one substantially palindromic oligonucleotide sequence that is self-complimentary.

Claim 20. (Previously added) A DNA sequence as recited in Claim 10, wherein the conditions that exist within mammalian cells that overexpress eukaryotic initiation factor eIF4E relative to normal cells are those that exist in metastatic tumor cells.

Claim 21. (Previously added) A messenger RNA sequence that comprises a translatable sequence encoding a toxin, and an untranslated sequence; wherein the untranslated sequence comprises an mRNA sequence with a secondary structure conformation having a stability $\Delta G \geq$ about 50 Kcal/Mol and wherein the untranslated sequence inhibits translation of the toxin sequence under conditions that exist within normal mammalian cells that do not overexpress eukaryotic initiation factor eIF4E and wherein the untranslated sequence allows translation of the toxin sequence under conditions that exist within mammalian cells that overexpress eukaryotic initiation factor eIF4E relative to normal cells.

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Claim 22. (Previously added) A vector comprising the DNA sequence of claim 10.

Claim 23. (Currently amended) The vector of claim 21 22, wherein the vector is a viral vector.

Claim 24. (Previously added) The vector of claim 22, wherein the vector is a non-viral vector.

Claim 25. (Previously added) The vector of claim 23, wherein the vector is a BK vector.

Claim 26. (Currently amended) A pharmaceutical composition comprising a therapeutically effective amount of the vector of claim 21 22 and a carrier.

Claim 27. (Previously added) The pharmaceutical composition of claim 25 26 wherein the carrier is a liposomal complex.